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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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PERKINS COIE LLP
PATENT-SEA
P.O. BOX 1247
SEATTLE, WA 98111-1247

EXAMINER

BRINEY III, WALTER F

ART UNIT PAPER NUMBER

2646

DATE MAILED: 09/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/086,601

Applicant(s)

CHUNG, SHENG-FENG

Examiner

Walter F. Briney III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09 June 2005 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. **Claims 1-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.**

Claim 1 recites, inter alia, an ADSL protocol cardbus interface. It is submitted that the applicant's invention is generally directed toward a network interface card that supports the ADSL communication protocol. In addition, the interface card comprises a CardBus interface; CardBus is known in the art as a digital computer bus communication protocol. However, there is no indication in the applicant's specification

that the CardBus interface somehow directly supports the ADSL protocol. In other words, there is no suggestion that the CardBus interface translates modulated ADSL signals into appropriate CardBus signals. In contrary, it appears that the DSP (110) provides, at least, intermediate translation between ADSL signals and CardBus signals. As such, it is submitted that the new limitation of "an ADSL protocol cardbus interface" constitutes new matter. Furthermore for the purposes of this action, it is assumed that "an ADSL protocol network interface card comprising," *inter alia*, "a cardbus interface is claimed." Support for this is clearly provided on page 3, lines 6-9, of the applicant's specification.

Claims 2-6 depend on claim 1, and therefore, recite the same limitation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Price (US Patent 6,393,110) in view of PCMCIA press release (16 September 1997) and further in view of Nelson et al. (US Patent 6,404,393).**

Claim 1 is limited to a *network interface card*. Price discloses a *DSP* (figure 3, element 376) *connected to said CardBus interface to process a digital signal*; a *D/A converter* (figure 3, element 372); a *transmitter amplifier* (figure 3, element 364) (figure

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4, element U1); *a multi-level filter* (figure 4, elements C12, C7, C16) *connected to a D/A converter* (figure 3, element 372); *a protection circuit* (figure 4, element U1, see optical boundary) *coupled to said transmitter amplifier* (figure 4, element U1). Price discloses a terminal (figure 3, element 228) connected to the modem described above. These devices are interfaced by a data controller (figure 3, element 388); however, Price does not disclose the protocol for communication between the two devices. Price does mention that the terminal is a personal computer (column 4, lines 52-53), and that the modem is a PCMCIA card (column 5, lines 49-55). Therefore, Price anticipates all limitations of the claim with the exception of *a CardBus interface for digital signal processing and controlling information transmission*.

A PCMCIA press release on 16 September 1997 discloses that CardBus is the new standard in PC-card peripherals. It benefits from greater speed than 16-bit PC-cards (PCMCIA press releases, pages 16-17) making it ideal for high-speed DSL. It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the PCMCIA card of Price using CardBus technology (i.e. CardBus interface) because CardBus is the industry standard and provides high-speed 32-bit access. Clearly, Price discloses connecting the modem of figure 3 to a telephone line (figure 3, element 230), however, there is no mention of how to connect the modem. Therefore, Price in view of the PCMCIA press release makes obvious all limitations of the claim with the exception of *a phone jack connected to said protection circuit for plugging a transmission line to communicate to outside*.

Nelson teaches a PCMCIA card that connects with a DSL line through an RJ-11 connector (column 3, lines 44-55). It would have been obvious to one of ordinary skill in the art at the time of the invention to connect the modem of Price using an RJ-11 jack as taught by Nelson for the purpose of enabling a modular interconnection with a personal computer and a network.

With respect to the new limitation of an ADSL protocol cardbus interface, it was shown in the preceding section that this is directed to new subject matter, however, it is submitted that the network interface card claimed supports the ADSL protocol. Price is directed to an ADSL PCMCIA card as disclosed in column 5, lines 16-33. Therefore, Price in view of the PCMCIA press release and further in view of Nelson makes obvious all limitations of the claim.

Claim 2 is limited to *the network interface card of claim 1*, as covered by Price in view of the PCMCIA press release and further in view of Nelson. Price discloses a line isolation facility (i.e. *said protection circuit*) (figure 3, element 362) that protects from lightning strikes (i.e. *includes a current protector*) (column 5, lines 30-45). Therefore, Price in view of the PCMCIA press release and further in view of Nelson makes obvious all limitations of the claim.

Claim 3 is limited to *the network interface card of claim 1*, as covered by Price in view of the PCMCIA press release and further in view of Nelson. Price discloses a line isolation facility (i.e. *said protection circuit*) (figure 3, element 362) that protects from lightning strikes (i.e. *includes a bias protector*) (column 5, lines 30-45). Therefore, Price

in view of the PCMCIA press release and further in view of Nelson makes obvious all limitations of the claim.

Claim 4 is limited to *the network interface card of claim 1*, as covered by Price in view of the PCMCIA press release and further in view of Nelson. Price discloses a line isolation facility (i.e. *said protection circuit*) (figure 3, element 362) that protects from lightning strikes (i.e. *includes a lightning protector*) (column 5, lines 30-45). Therefore, Price in view of the PCMCIA press release and further in view of Nelson makes obvious all limitations of the claim.

Claim 6 is limited to *the network interface card of claim 1*, as covered by Price in view of the PCMCIA press release and further in view of Nelson. Price discloses three capacitors (i.e. *a three-level filter*) (figure 4, elements C12, C7, C16), which effectively block DC components from reaching the receive amp, and further the D/A converter. Therefore, Price in view of the PCMCIA press release and further in view of Nelson makes obvious all limitations of the claim.

3. **Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anne (US Patent 6,603,808) in view of the PCMCIA press release and further in view of Nelson.**

Claim 1 is limited to *a network interface card*. Anne discloses a *DSP* (figure 2, element 220); a *D/A converter* (figure 2, element DAC); a *transmitter amplifier* (figure 2, element 212); a *multi-level filter* (figure 2, elements 204, 200) *connected to a D/A converter* (figure 2, element 204); a *protection circuit* (figure 2, element 200) *coupled to said transmitter amplifier* (figure 2, element 212). Anne discloses a *MAC interface* (figure 2, element 224) connected to a personal computer (figure 1). These devices are

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interfaced by a PCMCIA port (figure 1, element 132), however, Anne does not disclose the protocol for communication between the two devices. Therefore, Anne anticipates all limitations of the claim with the exception of *a CardBus interface for digital signal processing and controlling information transmission*.

A PCMCIA press release on 16 September 1997 discloses that CardBus is the new standard in PC-card peripherals. It benefits from greater speed than 16-bit PC-cards (PCMCIA press releases, pages 16-17) making it ideal for high-speed DSL. It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the PCMCIA card of Anne using CardBus technology (i.e. CardBus interface) because CardBus is the industry standard and provides high-speed 32-bit access. Clearly, Anne discloses connecting the modem of figure 3 to a telephone line (figure 3, element 230), however, there is no mention of how to connect the modem. Therefore, Price in view of the PCMCIA press release makes obvious all limitations of the claim with the exception of *a phone jack connected to said protection circuit for plugging a transmission line to communicate to outside*.

Nelson teaches a PCMCIA card that connects with a DSL line through an RJ-11 connector (column 3, lines 44-55). It would have been obvious to one of ordinary skill in the art at the time of the invention to connect the modem of Anne using an RJ-11 jack as taught by Nelson for the purpose of enabling a modular interconnection with a personal computer and a network.

With respect to the new limitation of an ADSL protocol cardbus interface, it was shown in the preceding section that this is directed to new subject matter, however, it is

submitted that the network interface card claimed supports the ADSL protocol. Anne is directed to an ADSL PCMCIA card as disclosed in column 5, lines 22-41. Therefore, Anne in view of the PCMCIA press release and further in view of Nelson makes obvious all limitations of the claim.

Claim 5 is limited to *the network interface card of claim 1*, as covered by Anne in view of the PCMCIA press release and further in view of Nelson. Anne discloses line-coupling magnetics (figure 2, element 200) *wherein said protection circuit includes a high-voltage-to-low-voltage transformer* (column 10, lines 55-65). Therefore, Anne in view of the PCMCIA press release and further in view of Nelson makes obvious all limitations of the claim.

Response to Arguments

Applicant's arguments filed 13 April 2005 in connection with the current RCE have been fully considered, but they are not persuasive.

With respect to claim 1, the applicant alleges on pages 4 and 5 of the current response that claim 1, as currently amended, is distinguished over Price or Anne in view of the PCMCIA press release; the examiner respectfully disagrees. As a first matter, the applicant's specification does not provide any support for "an ADSL protocol cardbus interface." Rather, an ADSL network interface card with a cardbus interface is provided. As such, the amendment is new matter.

Furthermore, assuming *arguendo* that claim 1 recited an ADSL protocol network interface card, it is noted that both Price and Anne provide ADSL network interface

cards. See Price column 5, lines 16-33, and Anne column 5, lines 22-41. This renders the applicant's allegation that neither Price nor Anne is even capable of providing ADSL service moot.

The applicant's allegation concerning the unexpected results of the invention appears baseless. The PCMCIA press release clearly covers the topics of high-speed cardbus communication and its applications towards Internet access and mobile computing. Furthermore, the sizing issue is also clearly addressed. In particular, under the heading "CardBus Defined," the PCMCIA press release states that, "this design provides for a compact, rugged card that can be inserted completely within its host computer without having any external cabling."

In addition, the motivation to combine either Price or Anne with the teachings of the PCMCIA press release have been clearly provided in the previous Office Action. In particular, the press release states that the CardBus standard "operates four- to six-times faster than 16-bit PC cards." This clearly reduces bandwidth limitations providing "[h]igher speed LAN access, video processing and Internet access." See page 17.

Finally, the applicant's allegation that CardBus has not been implemented by the network industry appears to be merely an opinion as it is not supported by any evidence. Therefore, as all of the arguments treated *supra* have been shown to be either moot or unpersuasive, the rejection of claim 1 is maintained.

With respect to claims 2-6, the applicant alleges on page 5 of the current response that these claims are patentable for at least the same reasons treated above.


However, as all these arguments have been shown to be either moot or unpersuasive, the rejections of claims 2-6 are maintained.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter F. Briney III whose telephone number is 571-272-7513. The examiner can normally be reached on M-F 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


SINH TRAN
SUPERVISORY PATENT EXAMINER

WFB
9/23/05